

## Long-term Chemical Evolution of the Jupiter Stratosphere Following the SL9 Impacts

M. A. McGrath (STScI), R. V. Yelle, Y. Betremieux (Boston U.)

Analyses of post-impact ultraviolet spectra of Jupiter taken with the Hubble Space Telescope Faint Object Spectrograph to determine abundances and vertical distribution of impact-generated species such as CS<sub>2</sub> and NH<sub>3</sub> have been presented for data obtained through August 9, 1994 by Yelle and McGrath (1996). We present in this paper new analyses of post-impact data taken in March, April and September 1995. Initial modeling of the April 1995 data shows the continued presence of NH<sub>3</sub> and CS<sub>2</sub> in the stratosphere, and an NH<sub>3</sub> distribution of  $\sim 10^{16} \text{ cm}^{-2}$  in the lower stratosphere between 30 and 70 mbar, and no NH<sub>3</sub> above 30 mbar produces a good fit to the data. Confinement of NH<sub>3</sub> to the troposphere (below 100 mbar) does not produce adequate NH<sub>3</sub> band contrast to match the April 1995 data. Information about the aerosol population inferred from model fits to the data imply that the abundance has decreased, and that the aerosols reside deeper in the atmosphere ( $> 70$  mbar) than in August 1994. The abundances and distributions, particularly for NH<sub>3</sub>, will be compared with other data and the photochemical models.

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Paper presented by Melissa A. McGrath  
Space Telescope Science Institute  
3700 San Martin Drive

Baltimore MD 21218 USA  
Phone: 410-338-4545  
Fax: 410-338-4767  
Email: mcgrath@stsci.edu

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